

Attorney Docket No.: 740.013US3 (IU-0030)
Inventors: Kwon, Byoung S.
Serial No.: 10/027,199
Filing Date: December 20, 2001
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An isolated nucleic acid molecule ~~encoding for~~ comprising a nucleotide sequence that encodes the extracellular domain of a human receptor protein H4-1BB ~~comprising of~~ SEQ ID NO:2.

Claim 2 (currently amended): ~~The~~ An isolated nucleic acid molecule ~~of claim 1~~ having a nucleotide sequence comprising SEQ ID NO:1.

Claim 3 (currently amended): The isolated nucleic acid molecule of ~~claim 1~~ claim 2, identified as pH4-1BB deposited at the Agricultural Research Service Culture Collection with the accession number NRRL B21131.

Claim 4-18 (canceled).

Claim 19 (currently amended): An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- a) ~~nucleotides of H4-1BBFI (SEQ ID NO:3);~~
- b) ~~nucleotides of H4-1BBFII (SEQ ID NO:4);~~
- c) ~~nucleotides of H4-1BBRI (SEQ ID NO:5);~~
- d) ~~nucleotides of H4-1BBRII (SEQ ID NO:6);~~
- e) ~~nucleotides of SEQ ID NO:7;~~

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~~f) nucleotides of SEQ ID NO:8;~~

~~g) a)~~ nucleotides of a DNA encoding a soluble human 4-1BB polypeptide comprising the extracellular domain of human 4-1BB (amino acids 1-186 of SEQ ID NO:2) or a fragment of the extracellular domain capable of binding a 4-1BBL; and

~~h) b)~~ nucleotides of subparagraph ~~g) a)~~ wherein said DNA additionally encodes a polypeptide that is not a human 4-1BB polypeptide and which is located C-terminal to the extracellular domain of human 4-1BB polypeptide.

Claim 20 (currently amended): ~~An~~ The isolated nucleic acid molecule ~~encoding a human 4-1BB polypeptide, wherein said molecule comprises a nucleotide sequence selected from the group consisting of~~ of claim 1 comprising:

~~a) nucleotides 41-805 of SEQ ID NO:1; and or~~

~~b) nucleotides 41-598 of SEQ ID NO:1.~~

Claim 21 (currently amended): A recombinant expression vector comprising the nucleic acid molecule of claim 19 ~~g) a)~~, 19 ~~h) b)~~, or 20 operably linked to regulatory sequences suitable for expression of the nucleic acid molecule in a host cell.

Claim 22 (previously presented): A recombinant expression vector comprising a recombinant nucleic acid molecule comprising a nucleic acid segment encoding SEQ ID NO:2 or the extracellular domain thereof operably linked to regulatory sequences suitable for expression of the nucleic acid segment in a host cell.

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Claim 23 (currently amended): The recombinant expression vector of claim 22 wherein the recombinant nucleic acid molecule further comprises a nucleic acid segment that encodes a polypeptide ~~that is no SEQ ID NO:2 or the extracellular domain thereof~~ which is neither SEQ ID NO:2, nor the extracellular domain thereof, and which is located C-terminal to SEQ ID NO:2 or the extracellular domain thereof.